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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/558,446

05/31/2007

Catherine A. L. Maris

L0009/US

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30522 7590 12/17/2009  
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EXAMINER

MULLIS, JEFFREY C

ART UNIT

PAPER NUMBER

1796

NOTIFICATION DATE

DELIVERY MODE

12/17/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

kratonip@kraton.com

|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/558,446 | <b>Applicant(s)</b><br>MARIS ET AL. |  |
|                              | <b>Examiner</b><br>Jeffrey C. Mullis | <b>Art Unit</b><br>1796             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 8-14, 16-21 and 23-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-14, 16-21 and 23-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9-23-09</u> .   | 6) <input type="checkbox"/> Other: _____                          |

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-14, 16-21 and 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Modic (US 5,969,034) in view of De Keyzer et al. (US 6,465,557) and Prost (US 4,283,809).

Patentees disclose a composition for overmolding onto a polar substrate such as that for a tool handle comprising a hydrogenated styrene diene styrene block copolymer and a grafted EPDM (abstract, column 4, lines 12-20). Note Tables 1-3 for use of Kraton G polymers. Note also that the instant specification discloses that Kraton G polymers may be used (paragraph 43 of applicants published specification) and therefore applicants SBC characteristics reasonably appear to be inherent in those SBC's of the reference which also uses Kraton G polymers. Note that Table 2 discloses mixtures of styrenic block copolymers wherein one of the styrenic block copolymers is SEBS grafted with 1.7 maleic anhydride as in applicants functionalized polyolefin.

Arguably, applicants MFR's and 1,2 vinyl content is not inherent in the primary reference and nylon substrates are not disclosed. Note however that low viscosity during processing is desirable at column 2, lines 2-10.

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De Keyzer discloses that viscosity of SBC's drop with rising vinyl content and lowest viscosity occurs for vinyl contents of 70-80% at column 2, lines 57-67.

Prost discloses that suitable materials for tool handles include nylon at column 2, lines 45-55.

It would have been obvious to a practitioner having an ordinary skill in the art at the time of the invention to use nylon for the tool handle of the primary reference (which is overmolded in the primary reference) motivated by the need for a specific material suitable for a tool handle as used by the primary reference and by Prost's disclosure that nylon is suitable absent any showing of surprising or unexpected results.

To use the vinyl content of De Keyzer in the block copolymers of Modic would have been obvious to a practitioner having an ordinary skill in the art at the time of the invention in order to beneficially reduce viscosity (and which varies inversely with melt flow) absent any showing of surprising or unexpected results.

Claims 8-14, 16-21 and 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata et al. (US 5,191,024) in view of Huff (US 5,160,474).

Patentees disclose a composition which may containing a hydrogenated ABA styrenic block copolymer in which the diene block is more than 60% vinyl functional (abstract).

The block copolymers may include mixtures of modified (as in applicants components "b") and unmodified block copolymers at column 2, lines 26-35. The MFR's encompass those of the instant claims at column 4, lines 11-17. Grafted ethylene propylene rubber may be added at column 13, lines 43-45 in an amount of 0.1-100 parts by weight based

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on 100 parts SBC at column 13, lines 25-30. The material has especially good properties for automotive parts at column 42, lines 1-5.

Overmolding on polar substrates such as polyamide is not disclosed by the primary reference.

Huff discloses overmolding of an elastomer onto a nylon automotive radiator at column 1, lines 5-20.

It would have been obvious to a practitioner having an ordinary skill in the art at the time of the invention to overmold the material of the primary reference onto a nylon automotive as taught by the secondary reference, motivated by the desire of the primary reference to create automotive parts from the materials disclosed and by the disclosure of the secondary reference of details for accomplishing this goal absent any showing of surprising or unexpected results.

Claims 8-14, 16-21 and 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakashima et al. (US 6,576,691)

Patentees disclose a molding resin containing olefin polymers and conjugated diene polymers (abstract) in which the conjugated diene polymers may be ABA block copolymers having applicants vinyl content (Table 1 in column 10). The olefin polymers may be modified or unmodified and have a MFR of up to 100 g/10 min at column 6, lines 26- column 7 line 15. Note claim 5 of the patent for addition of aramide fibers and as the fibers would be molded in the resin, they can be viewed as overmolded.

There are no actual examples in which all of applicants materials are present in combination. However it would have been obvious to a practitioner having an ordinary

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skill in the art at the time of the invention to arrive at applicants invention by selecting from the various disclosures of the reference in the expectation of adequate results absent any showing or surprising or unexpected results.

Ueda et al, previously cited of interest discloses that YUMEX 1001 has applicants grafting level at paragraph 91 while Kashiwabara (US 2007/0104887) discloses that YUMEX has a molecular weight of 40,000 at paragraph 76.

Applicant's arguments filed 9-23-09 have been fully considered but they are not persuasive. None of the instant claims require polycarbonate as the lower limit recited by the claims for polycarbonate is zero.

It is not clear why Nakashima would go through the trouble of using fiber form aramide fibers if the fiber form were destroyed during molding not has applicants presented any evidence that the common process of adding fibers to molding resins actually results in resin with non fiber material as the final product. Nakashima does not disclose that fibers are present in bubbles in their resin or that the resin. The examiner realizes that an incompatible material in a resin may not bond well with the material but even assuming that the resin and aramide fiber in the resin are incompatible it is not clear why fibers present in bubbles would result from Nakashimas' process. Those skilled in the art reading Nakashima would not reasonably come to such a conclusion. If all of the elements of applicants invention were present in combination then a rejection under 35 USC 102 would have been made. It is not the position of the

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examiner that Nakashima anticipates the claims. Patentees disclose various choices for their comports "A" and "B" which include applicants materials and that "A" and "B" and their other components are to be combined. Hence there is motivation in the reference to arrive at applicants' composition. Applicants have not been clear as to why they believe patentees claim 5 is not supported by patentees' specification but in any case even if true such a fact has no bearing on the issues under 35 USC 103. Applicants argue that melt flow rates run under conditions other than applicants are not comparable to applicants. However, met flow rates reported at lower load and temperature would have higher melt flow rates under applicants conditions and thus would still be within the metes and bounds of the claims which recite melt flow rates that are open ended at the upper limit. Only Shibata discloses higher load or temperature conditions that applicants. However, given that Shibatas melt flow rates are open ended at the upper level means that Shibatas melt flow rates and applicants overlap as neither applicants and patentees molecular weights have a lower limit.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to Jeffrey C. Mullis  
M-F, 9-5 pm at telephone number 571 272 1075.

Jeffrey C. Mullis  
Primary Examiner  
Art Unit 1796

JCM

12-11-09

/Jeffrey C. Mullis/

Primary Examiner, Art Unit 1796